

## § 98.317

### § 98.317 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) and (b) of this section for each titanium dioxide production facility.

(a) If a CEMS is used to measure CO<sub>2</sub> emissions, then you must retain under this subpart required for the Tier 4 Calculation Methodology in § 98.37 and the information listed in this paragraph (a):

(1) Records of all calcined petroleum coke purchases.

(2) Annual operating hours for each titanium dioxide process line.

(b) If a CEMS is not used to measure CO<sub>2</sub> emissions, then you must retain records for the information listed in this paragraph:

(1) Records of all calcined petroleum coke purchases (tons).

(2) Records of all analyses and calculations conducted for all reported data as listed in § 98.316(b).

(3) Sampling analysis results for carbon content of consumed calcined petroleum coke (percent by weight expressed as a decimal fraction).

(4) Sampling analysis results for the carbon content of carbon containing waste (percent by weight expressed as a decimal fraction), if applicable.

(5) Monthly production of carbon-containing waste (tons).

(6) You must document the procedures used to ensure the accuracy of the monthly petroleum coke consumption and quantity of carbon-containing waste measurement including, but not limited to, calibration of weighing equipment and other measurement devices. The estimated accuracy of measurements made with these devices must also be recorded, and the technical basis for these estimates must be provided.

(7) Annual operating hours for each titanium dioxide process line (hours).

### § 98.318 Definitions.

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part.

## Subpart FF [Reserved]

## 40 CFR Ch. I (7–1–10 Edition)

### Subpart GG—Zinc Production

#### § 98.330 Definition of the source category.

The zinc production source category consists of zinc smelters and secondary zinc recycling facilities.

#### § 98.331 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains a zinc production process and the facility meets the requirements of either § 98.2(a)(1) or (2).

#### § 98.332 GHGs to report.

You must report:

(a) CO<sub>2</sub> process emissions from each Waelz kiln and electrothermic furnace used for zinc production.

(b) CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O combustion emissions from each Waelz kiln. You must calculate and report these emissions under subpart C of this part (General Stationary Fuel Combustion Sources) by following the requirements of subpart C.

(c) CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions from each stationary combustion unit other than Waelz kilns. You must report these emissions under subpart C of this part (General Stationary Fuel Combustion Sources) by following the requirements of subpart C.

#### § 98.333 Calculating GHG emissions.

You must calculate and report the annual process CO<sub>2</sub> emissions using the procedures specified in either paragraph (a) or (b) of this section.

(a) Calculate and report under this subpart the process or combined process and combustion CO<sub>2</sub> emissions by operating and maintaining a CEMS according to the Tier 4 Calculation Methodology in § 98.33(a)(4) and all associated requirements for Tier 4 in subpart C of this part (General Stationary Fuel Combustion Sources).

(b) Calculate and report under this subpart the process CO<sub>2</sub> emissions by following paragraphs (b)(1) and (b)(2) of this section.

(1) For each Waelz kiln or electrothermic furnace at your facility used for zinc production, you must determine the mass of carbon in each carbon-containing material, other than fuel, that is fed, charged, or otherwise

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introduced into each Waelz kiln and electrothermic furnace at your facility for each year and calculate annual CO<sub>2</sub> process emissions from each affected unit at your facility using Equation GG-1 of this section. For electrothermic furnaces, carbon containing input materials include carbon electrodes and carbonaceous reducing

agents. For Waelz kilns, carbon containing input materials include carbonaceous reducing agents. If you document that a specific material contributes less than 1 percent of the total carbon into the process, you do not have to include the material in your calculation using Equation R-1 of § 98.183.

$$E_{CO_2k} = \frac{44}{12} * \frac{2000}{2205} * [(Zinc)_k * (C_{Zinc})_k + (Flux)_k * (C_{Flux})_k + (Electrode)_k * (C_{Electrode})_k + (Carbon)_k * (C_{Carbon})_k] \quad (\text{Eq. GG-1})$$

Where:

$E_{CO_2k}$  = Annual CO<sub>2</sub> process emissions from individual Waelz kiln or electrothermic furnace "k" (metric tons).

44/12 = Ratio of molecular weights, CO<sub>2</sub> to carbon.

2000/2205 = Conversion factor to convert tons to metric tons.

(Zinc)<sub>k</sub> = Annual mass of zinc bearing material charged to kiln or furnace "k" (tons).

(C<sub>Zinc</sub>)<sub>k</sub> = Carbon content of the zinc bearing material, from the annual carbon analysis for kiln or furnace "k" (percent by weight, expressed as a decimal fraction).

(Flux)<sub>k</sub> = Annual mass of flux materials (e.g., limestone, dolomite) charged to kiln or furnace "k" (tons).

(C<sub>Flux</sub>)<sub>k</sub> = Carbon content of the flux materials charged to kiln or furnace "k", from the annual carbon analysis (percent by weight, expressed as a decimal fraction).

(Electrode)<sub>k</sub> = Annual mass of carbon electrode consumed in kiln or furnace "k" (tons).

(C<sub>Electrode</sub>)<sub>k</sub> = Carbon content of the carbon electrode consumed in kiln or furnace "k", from the annual carbon analysis (percent by weight, expressed as a decimal fraction).

(Carbon)<sub>k</sub> = Annual mass of carbonaceous materials (e.g., coal, coke) charged to the kiln or furnace "k" (tons).

(C<sub>Carbon</sub>)<sub>k</sub> = Carbon content of the carbonaceous materials charged to kiln or furnace, "k", from the annual carbon analysis (percent by weight, expressed as a decimal fraction).

(2) You must determine the CO<sub>2</sub> emissions from all of the Waelz kilns or electrothermic furnaces at your facility using Equation GG-2 of this section.

$$CO_2 = \sum_{k=1}^n E_{CO_2k} \quad (\text{Eq. GG-2})$$

Where:

CO<sub>2</sub> = Annual combined CO<sub>2</sub> emissions from all Waelz kilns or electrothermic furnaces (tons).

$E_{CO_2k}$  = Annual CO<sub>2</sub> emissions from each Waelz kiln or electrothermic furnace k calculated using Equation GG-1 of this section (tons).

n = Total number of Waelz kilns or electrothermic furnaces at facility used for the zinc production.

(c) If GHG emissions from a Waelz kiln or electrothermic furnace are vented through the same stack as any combustion unit or process equipment that reports CO<sub>2</sub> emissions using a CEMS that complies with the Tier 4 Calculation Methodology in subpart C of this part (General Stationary Fuel Combustion Sources), then the calculation methodology in paragraph (b) of this section shall not be used to calculate process emissions. The owner or operator shall report under this subpart the combined stack emissions according to the Tier 4 Calculation Methodology in § 98.33(a)(4) and all associated requirements for Tier 4 in subpart C of this part.

### § 98.334 Monitoring and QA/QC requirements.

If you determine CO<sub>2</sub> emissions using the carbon input procedure in § 98.333(b)(1) and (b)(2), you must meet the requirements specified in paragraphs (a) and (b) of this section.

(a) Determine the mass of each solid carbon-containing input material consumed using facility instruments, procedures, or records used for accounting purposes including direct measurement weighing or through the use of purchase records same plant instruments